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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,972	10/01/2004	Yusheng Xiong	2111YP	9958
210 7590 06/15/2007 MERCK AND CO., INC P O BOX 2000 RAHWAY, NJ 07065-0907			EXAMINER CHUNG, SUSANNAH LEE	
			ART UNIT 1626	PAPER NUMBER
			MAIL DATE 06/15/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/509,972	Applicant(s) XIONG ET AL.	
	Examiner Susannah Chung	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/16/2005, 8/8/2005</u> | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

Claims 1-15 are pending in the instant application.

***Priority***

This application is a 371 of PCT/US03/16336, filed 05/23/2003 which claims benefit of 60/383,996, filed 05/29/2002.

***Response to Election/Restrictions***

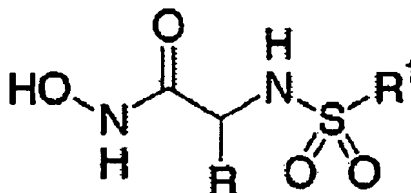
Applicant's election with traverse of Group I in the reply filed on 5/9/2007 is acknowledged. The traversal is on the ground that there is no serious burden on examiner to search the entire genus as claimed. As indicated in the previous action, there is art on the genus of the compound that is fixed and present in all compounds. In view of the art found in the previous office action and the instant action, there is a serious burden on examiner to search the entire genus.

Therefore, for the above reasons, the requirement is still deemed proper and is therefore maintained.

***Scope of the Elected Invention***

Claims 1-15 are pending in this application.

The scope of the elected subject matter that will be examined and searched is as follows:



Compounds of formula (I), , wherein R is preferably

heterocycloalkyl, heterocycle containing moiety, and R1 is preferably aryl.

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*Scope of Withdrawn Subject Matter*

Claims 10-15 are withdrawn from further consideration by the examiner, 37 C.F.R. §1.142(b), as being drawn to a non-elected invention. The withdrawn subject matter is patentably distinct from the elected subject matter as it differs in structure and element and would require separate search considerations. In addition, a reference, which anticipates one group, would not render obvious the other.

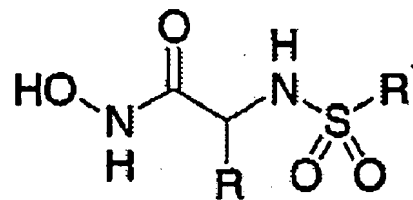
*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

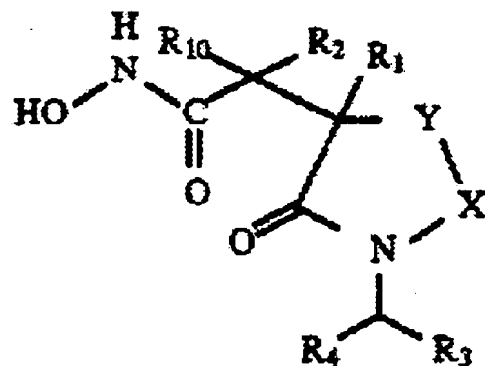
Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobsen, et al (U.S. Pat. No. 5,712,300).



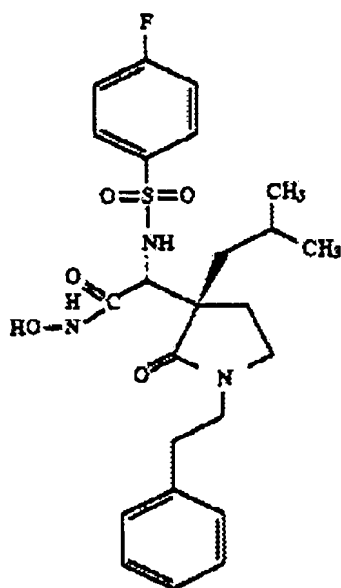
Applicants claims relate to compounds of formula (I),

wherein R is preferably heteroaryl, and R1 is preferably aryl. Jacobsen discloses the compound

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of formula (I), , wherein R2 is NHSO2R5, wherein R5 is aryl, optionally substituted, yielding the compound of formula,



found in U.S. Pat. No. 5,712,300, Column 104, lines 28-60, a-[[[4-fluorophenyl)sulfonyl]amino]-N-hydroxy-3-(2-methylpropyl)-2-oxo-1-(2-phenylethyl)-, [R-(R\*,S\*)]-3-Pyrrolidineacetamide, CAS RN 196951-47-0, which anticipates the instantly claimed genus.

### *Claim Rejections - 35 USC § 102*

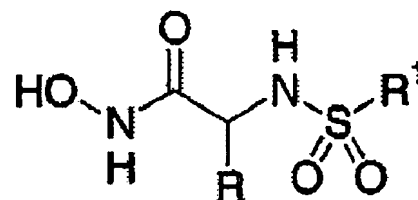
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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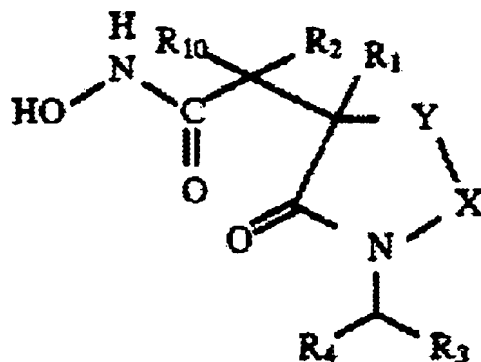
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Almstead, et al (U.S. Pat. No. 6,218,389).



Applicants claims relate to compounds of formula (I),

wherein R is preferably heteroaryl, and R1 is preferably aryl. Almstead discloses the compound



of formula (I),

, wherein R2 is NHSO2R5, wherein R5 is

aryl, optionally substituted, yielding the preferred compounds in example 6, column 26, lines 56-70,

Tetrahydro-N-hydroxy-a-[[[(4-methoxyphenyl)sulfonyl]amino]-4-(methylthio)-2H-thiopyran-4-acetamide, CAS RN 220391-58-2,

N-hydroxy-a-[[[(4-methoxyphenyl)sulfonyl]amino]-1-methyl-4-(methylthio)-4-

Piperidineacetamide, CAS RN 220391-59-3,

a-[[[(4-bromophenyl)sulfonyl]amino]-N-hydroxy-1-(methylthio)-Cyclohexaneacetamide, CAS RN 220391-60-6,

which anticipate the instantly claimed genus.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

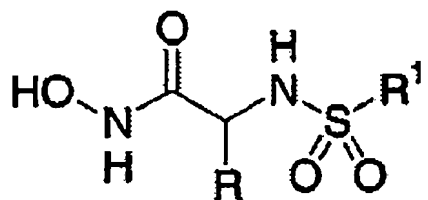
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al., U.S. Pat. No. 5,712,300 and Almstead et al., U.S. Pat. No. 6,218,389.

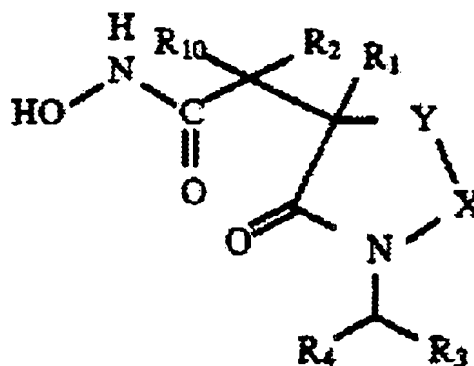
Applicants instant elected invention teaches the compound of formula (I),



, wherein R is preferably heteroaryl, and R<sup>1</sup> is preferably aryl.

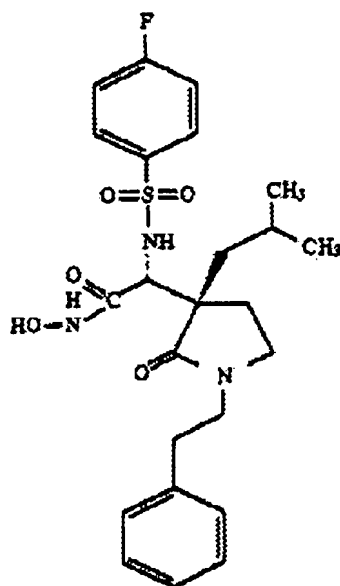
*Determination of the scope and content of the prior art (MPEP § 2141.01)*

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Jacobsen teaches the compound of formula (I),

wherein R2 is NHSO2R5, wherein R5 is aryl, optionally substituted, yielding the compound of



formula,

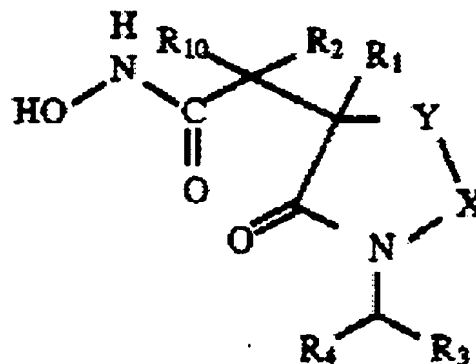
found in U.S. Pat. No. 5,712,300, Column 104, lines 28-60,

$\alpha$ -[[(4-fluorophenyl)sulfonyl]amino]-N-hydroxy-3-(2-methylpropyl)-2-oxo-1-(2-phenylethyl)-,

[R-(R\*,S\*)]-3-Pyrrolidineacetamide, CAS RN 196951-47-0.



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Almstead teaches the compound of formula (I),

wherein R2 is NHSO2R5, wherein R5 is aryl, optionally substituted, yielding the preferred compounds in example 6, column 26, lines 56-70,

Tetrahydro-N-hydroxy-a-[[[(4-methoxyphenyl)sulfonyl]amino]-4-(methylthio)- 2H-thiopyran-4-acetamide, CAS RN 220391-58-2,

N-hydroxy-a-[[[(4-methoxyphenyl)sulfonyl]amino]-1-methyl-4-(methylthio)- 4-

Piperidineacetamide, CAS RN 220391-59-3,

a-[[[(4-bromophenyl)sulfonyl]amino]-N-hydroxy-1-(methylthio)- Cyclohexaneacetamide, CAS RN 220391-60-6.

Ascertainment of the difference between the prior art and the claims (MPEP § 2141.02)

The difference between the prior art of Jacobson and Almstead and the instant claims is that in the prior art there are a limited number of heterocycle and heterocycloalkyl groups at the R position, while the instant application claims a broader genus.

Finding of prima facie obviousness – rationale and motivation (MPEP § 2142-2413)

However, in the absence of showing unobvious results, it would have been obvious to one of ordinary skill in the art at the time of the invention when faced with the teachings of Jacobson and Almstead to make products useful as pharmaceutical agents. One skilled in the art

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would know that the species and genus taught in Jacobson and Almstead would encompass other heterocyclic moieties as they become commercially available. In addition, the motivation would be to prepare similar compounds that are pharmacologically active to treat infections.

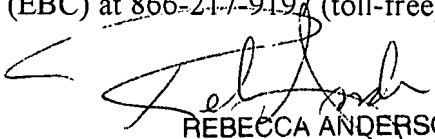
### *Telephone Inquiry*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susannah Chung whose telephone number is (571) 272-6098. The examiner can normally be reached on M-F, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Chung  
Patent Examiner, AU 1626

  
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PATENT EXAMINER

  
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Supervisory Patent Examiner  
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Technology Center 1600

Date: 6 June 2007